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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, MARINA

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,448	<b>Applicant(s)</b> FUKUI, SHINJI	
	<b>Examiner</b> MARINA LEE	<b>Art Unit</b> 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, and 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's amendment and response dated December 30, 2008 in responding to the Office Action of October 10, 2008 provided in the rejection of all pending claims 1-8.

Claims 1, 5, and 6 have been amended.

Claims 2 and 4 have been canceled.

No claims have been added.

Thus, claims 1, 3, and 5-8 are presented for the examination.

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Prior Art's Arguments - Rejections***

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3. Applicant's arguments with respect to new claim limitation " wherein, when a function block .... Said selected function block instance; and wherein, when a function block displayed by said instance....function block definition." currently recites per independent claims 1, 5, and 6 respectively, have been fully considered but are moot in view of Kodosky et al. (US 2003/0034998 A1 of record as will further be addressed under the Claim Rejections bellows.

### ***Claim Objections***

4. Claims 1, 3, and 5-8 are objected to because of the following informalities:

As to claim 1,

(Line 7) the limitation "storing a *program*" should be changed to – "storing *said program*"—. Appropriate correction is required.

(Line 28) the limitation "said selected *function block function*" should be changed to –"said selected *function block definition*"—. Appropriate correction is required

As to claim 5,

(Line 9), the limitation "accessing *said program*" should be changed to – "accessing *said program stored in said program memory*". Appropriate correction is required.

(Line 15) the limitation "said selected *function block function*" should be changed to –"said selected *function block definition*"—. Appropriate correction is required.

As to claim 6,

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(Line 11) the limitation, "accessing said program" should be changed to – "accessing said program stored in said program memory" –. Appropriate correction is required.

(Line 29) the limitation "said selected *function block function*" should be changed to – "said selected *function block definition*" –. Appropriate correction is required.

Claims 3, 7, and 8 are also objected to for being depended upon the objection of base claims 1 and 5.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, and 5-8 are rejected under 35U.S.C. 103(a) as being unpatentable over Eldridge et al. (US 7,272,815 B1 record – hereinafter Eldridge) in view of Kodosky et al. (US 2003/0034998 A1 of record – hereinafter Kodosky).

**As per claims 1, 5, and 6**, Eldridge discloses a method of displaying a program including function block for a display and edit device said function blocks – (e.g., *Ladder Logic Diagram D (Fig. 94)*, which contains *Program Logic Blocks (PLBs)* – See at least col. 104: 1-10) serving to use a language element referred to as function block definitions to establish input and output parameters, internal

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variables and operation algorithms of the function block and to create copies referred to as function block instances by instantiating said function block definitions when said function block is incorporated in a user program -- (e.g., *Ladder Diagram Editor (Fig. 95), which conjunction with the Ladder library (ladder element (functions block definitions: emphasis added)) for implementing the ladder diagram logic – See at least col. 104: 1-65 and col. 105: 1-35 with emphasis added*), said method comprising the steps of:

accessing said program stored in a program memory and analyzing structure relationship of function block definitions contained in said program (e.g., *ladder library, which contains common ladder element for carrying the ladder diagram logic – See at least col. 104: 11-59, col. 106: 13-24, and Fig. 95, with emphasis added*);

accessing said program and analyzing structure relationship of function block instances contained in said program (e.g., *the ladder elements (object) are selected (instantiated) from the ladder library – See at least col. 104, 11-26, Fig. 95 and associated text, with emphasis added*); and

displaying simultaneously the analyzed structure relationship of function block definition and the analyzed structure relationship of function block instance – (e.g., *the displaying of the elements such as the type hierarchical (tree) of library element is on the left hand side and the graphical element(s) is on the right hand side for carrying out the ladder logic diagram in the Ladder Diagram Editor– See at least Fig. 95, col. 104: 1-65 and col. 105: 1-35, with emphasis added*).

causing an instance display device to display a selected function block definition or a selected function block instance together with said structure relationship of the analyzed structure relationship of said function block definition and said structure relationship of the analyzed structure relationship of said function block instance – *(e.g., using either key strokes such as arrows keys to select the ladder element – see at least col. 104: 21-59 with emphasis added)*;

causing a display judging device to cause said structure display device to display with an emphasis the structure relationship of said selected function block definition or selected function block instance or a corresponding portion of the structure relationship of the function block instance – *(e.g., the current selected element ladder is highlight (emphasis) – See at least col. 104: 21-59 with emphasis added)*;

wherein, when a function block displayed by said instance display device is selected and said instance display device displays said selected function block function, said display judging device causes said structure display device to display with an emphasis the structure relationship of said select function block definition. – *(e.g., FIG. 69 shows the main display for the Block Definition Editor. The user is presented with the Project Manager Tree branch representing the hierarchy of block definitions. All block definitions derived from the base types show as lower branches in the tree – See at least col. 85: 1-13 and Fig. 69 with emphasis added)*

It is to note that Eldridge discloses Ladder Editor View (Figure 95), which contains element (s) hierarchy (tree) on the left windows panel and graphical element reflecting the selected (tree) element (s) on the right hand side of windows panel. –See Eldridge *at least Fig. 95, col. 104: 1-65 and col. 105: 1-35, with emphasis added*). It is noted that, however, Eldridge does not explicitly disclose wherein, when a function block displayed by said instance display device is selected and said instance displays said selected function block instance, said display judging device causes said structure display device to display with *an emphasis the structure relationship of said selected function block instance* – (e.g., graphical element(s) being displayed on the right of the windows in Fig. 95) with highlight (emphasis)); but, Kodosky, in analogous art teach ‘In one embodiment, the may also select an option to cause the source code of the program to be displayed. For example, if the program is a graphical program, then user selection of this option may cause the block diagram of the graphical program to be displayed. If the program is a text based program, such as a C-language program, then user selection of this option may cause the textual source code of the program to be displayed. The user may also select various debugging features to executing on the program. Various other operations are possible. For example, FIG. 20A illustrates a menu which includes options such as "Highlight Connections", "Hide All Sub-VIs", "Show VI Hierarchy", "Show All Sub-Vis", "Show All Callers", "Find All Instances", "Edit Icon", "VI Properties", "Open Front Panel" (see step 368), "Print Documentation" ' – See Kodosky, [0284-0285], [0013-0016], and Fig.20A with emphasis added.



Thus, it would have been obvious to one ordinary skill in the art at the time invention was made to use the graphical debugging feature (e.g., highlight connections etc Fig. 20 A) of Kodosky in the graphical element (s) on the right hand side window panel of Ladder Editor View (Figure 95) of Eldridge for enabling a user to more easily specify or creating a distributes the selected ladder elements in a graphical representation of the ladder logic (right and side) as taught in Kodosky (e.g., [0002]).

**Further regarding to claim 1**, Eldridge disclose a device (e.g., *work station 11 (fig. 1) – see Eldridge at least col. 18: 17-42*) for implementing method as of claim 5 above.

**Further regarding to claim 6**, Eldridge discloses a computer-readable medium (e.g., *diskette – See at least col. 18: 46-48*) for implementing method as of claim 5 above.

**As to claim 3**, Eldridge discloses further comprising a display selector that selectively determines, when a command to switch display is received, whether a function block definition or a function block instance should be displayed, based on current display and current conditions of processing by said display and edit device and causes the determined to be made (e.g., *using either key strokes such as arrows keys (command)to select the ladder element to be display on the view screen – see at least col. 104: 21-59 with emphasis added*).

**As to claim 7**, Eldridge discloses wherein said block definition analyzer is for accessing said program stored in said program memory, analyzing algorithm of function block definition which is detected in said program, carrying out a

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process of judging presence or absence of any function block definition that is being called in said algorism and, if a called function block definition is found to be present, connecting said called function block definition found to be present below an original function block definition, repeating said process until a function block definition not being called is reached to thereby analyze a connection relationship among function block definitions, and analyzing structure relationship of function block definitions contained in said program – (*e.g., the modified ladder elements are put back into the ladder library for latter use as a template -- See at least col. 105: 36- 67 and col. 106: 1-26 with emphasis added*) ; and

wherein said block instance analyzer is for accessing said program stored in said program memory, analyzing algorism of function block instance which is detected in said program, carrying out a process of judging presence or absence of any function block instance that is being called in said algorism and, if a called function block instance is found to be present, connecting said called function block instance found to be present below an original function block instance, repeating said process until a function block instance not being called is reached to thereby analyze a connection relationship among function block instances, and analyzing structure relationship of function block instances contained in said program (*e.g., the element ladder from the ladder library are being modified and connect to each other -- See at least col. 105: 36- 67 and col. 106: 1-26 with emphasis added*); and

a structure display device for causing to simultaneously display structure relationship of the analyzed structure relationship of said function block definition and structure relationship of the analyzed structure relationship of said function block instance (*e.g., the displaying of ladder elements for carrying out the ladder logic diagram in the Ladder Diagram Editor – See at least Fig. 95, col. 104: 1-65 and col. 105: 1-35, with emphasis added*)...

**As to claim 8**, Eldridge discloses further comprising the step of accessing said program stored in a program memory, analyzing algorithm of function block definition which is detected in said program, carrying out a process of judging presence or absence of any function block definition that is being called in said algorithm and, if a called function block definition is found to be present, connecting said called function block definition found to be present below an original function block definition, repeating said process until a function block definition not being called is reached to thereby analyze a connection relationship among function block definitions, and analyzing structure relationship of function block definitions contained in said program (*e.g., the modified ladder elements are put back into the ladder library for latter use as a template -- See at least col. 105: 36- 67 and col. 106: 1-26 with emphasis added*); and

accessing said program, analyzing algorithm of function block instance which is detected in said program, carrying out a process of judging presence or absence of any function block instance that is being called in said algorithm and, if a called function block instance is found to be present, connecting said called function block instance found to be present below an original function block

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instance, repeating said process until a function block instance not being called is reached to thereby analyze a connection relationship among function block instances, and analyzing structure relationship of function block instances contained in said program (*e.g., the element ladder from the ladder library are being modified and connect to each other -- See at least col. 105: 36- 67 and col. 106: 1-26 with emphasis added.*

### **Conclusion**

7. The prior art made of record and not relied upon (cited on 892 form) is considered pertinent to application disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Lee whose telephone number is (571) 270-1648. The examiner can normally be reached on M-F (11am-7: 30pm) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

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